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THE EFFECT OF LAND SUBDIVISION UPON HOUSING AND PUBLIC HEALTH

By

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THE EFFECT OF LAND SUBDIVISION UPON HOUSING AND PUBLIC HEALTH.

By JOHN NOLEN,

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City land from the point of view of land subdivision may be put into three main classes—namely, land for industrial use, land for retail and wholesale business, and land for residential purposes. The principal field of land subdivision, however, the class which concerns at least two-thirds of all city land, is residential property. In fact, when land subdivision is spoken of, it is ordinarily assumed that it refers to the laying out of land for dwellings. The evils of undesirable and unintelligent land subdivision in the case of residential property are also more apparent and more in the public eye than in the case of industrial and business property.

There is a widespread feeling abroad and to some extent in this country that city planning has thought more of streets, of civic centers, of parks and playgrounds, and of other subjects, than it has of land subdivision, housing, and public health. Foreign town planners are constantly asking, "Why is housing not given more attention by city planners in the United States?"

There is much to be said, however, in answer to this question. There are reasons why land subdivision and housing have not been given more attention by city planners in this country. Some of the more important are the following:

1. On account of the Federal Constitution, which provides that private property can not be taken except for public use, and with due process of law and just compensation, and on account of the conservatism of our courts in interpreting the Constitution and the law, it is always very difficult and often very costly to regulate land subdivision and housing by public authority.

2. The rights and limitations of American municipalities have been such that so far as land subdivision controls—that is, location, width, etc., of streets, the width and depth of lots, and the location, density, and spacing of buildings, except tenement houses; all these features have been beyond public authority or else have often been largely determined before the outlying sections have been included within the city boundaries; on the other hand, there has practically been no effective control of such matters by rural or county governments.

3. Public opinion generally was not, and in fact is not yet favorable to the strict public regulation and control of the laying out of residential neighborhoods. It is, indeed, very difficult to make an advance, even in sanitary requirements, in measures for the reduction of fire hazard, in the reasonable protection of light and air, administrative regulations which might naturally be expected to receive attention in advance of broad city planning. In an address last month before the American Public Health Association, Dr. William T. Sedgwick recounted the victories of municipal sanitary engineering in recent years, but at the same time pointed out many flagrant failures in American sanitation. There is a widespread feeling that public health matters should have first attention. Thus, the obstacles to regulating and controlling land subdivision are greatly increased in this country by the "Laissez-faire" doctrine, by what is known as the rights of individual property, and by the strength of vested interests.

4. Until recently, aside from a few large cities, and other important but nevertheless exceptional developments, the characteristic housing in American towns and cities has seemed relatively good, so far as the subdivision of the land and city planning could affect it one way or another. The actual lots as built upon have been, usually, from 20 to 40 feet in width, and 100 feet or more in depth, with a density of eight or ten houses, or less, to the acre, the standard of the best English garden city development.

5. The disinclination of private capital, except in the case of a few employers for their own employes, to respond to invitations and opportunities to invest in housing schemes on the limited dividend principle, yielding only the normal business interest on invested funds of, say, 5 or 6 per cent, is another reason why housing and land subdivision have not apparently been given more attention in this country by landscape architects and town and city planners. Cooperation or copartnership in housing schemes, as in other matters, has not yet succeeded in the United States as it has in Europe.

To avoid misapprehension, however, it should be added that every one of these reasons has recently been losing its strength. Largely through the energetic and well directed efforts of the National Housing Association, the public is becoming more and more aware of the need and advantages of a somewhat radical change with regard to all of them. It is also becoming convinced that much of the housing in the United States that seems good is not good, and that large lot sizes do not necessarily result in safe, sanitary and pleasant homes.

One hesitates and is naturally timid in attempting to discuss land subdivision and its effect upon housing, because so little reliable data of any considerable extent exist on the subject. Much laying out of land has been done, but the merit of one scheme as against another has not been tested. To give a basis for conclusions and to guide future action in this matter, the executive committee of the National Conference on City Planning recently determined to make a systematic compilation of facts and of well digested opinion in regard to the most effective and satisfactory units of land subdivision for various purposes and under various conditions in American cities. The instructions to this committee are, broadly, to gather and digest any information likely to be of practical assistance to those responsible for maintaining and improving the quality of land subdivision plans. It is the intention to gather the essential facts about the more important types of subdivision plans which have been tested in actual use in the United States, and which have proved their advantages or disadvantages to the developer, to the owners and occupants, and to the general public An effort will be made to concentrate the study mainly upon a limited number of selected urban districts, representing large, small, and middle sized cities, some flat, some hilly, located in different sections of the country. The investigation will seek to discover the physical results, the sociological results, and the financial results of the various types. The more important points outlined for study are, depth of lot, width of lot, width and improvement of streets, and building or other restrictions.

The first results of this committee's investigation are now available, the local committees from the following municipalities having reported: Berkeley, Cal., Boston, Mass.; Bridgeport, Conn.; Brookline, Mass.; Chicago, Ill.; Cleveland, Ohio; Detroit, Mich., Kansas City, Mo.; Louisville, Ky.; New York City, Newark, N. J.; Philadelphia, Pa.; Syracuse, N. Y.; Washington, D. C.

The gist of the conclusions deduced by the local reporter as summarized in the committee's preliminary report may be stated as follows:

1. Lot size.

(*a*) Philadelphia is in a class by itself, with lot sizes averaging 15 by 60 feet.

(*b*) New England, based largely on returns from Boston and Brookline, is irregular, but the tendency is toward lots from 40 to 60 feet in width, by 92 to 100 feet in depth.

(*c*) New York and Newark show lot sizes from 20 to 25 feet in width, by 100 feet in depth (*d*) Middle and Western States have had larger lot sizes, with later tendencies toward reduction in both dimensions.

2. Lot size change tendencies.

(*a*) The general tendency shows a reduction in depth except in New York, Newark, and Chicago, the former put at 100 feet and the latter at 125 feet, respectively. These depths have been maintained as a standard for New York and Newark for 100 years, and for Chicago for 40 years.

(*b*) Cities which had lots deeper than 100 feet show a tendency to revise to that figure.

(*c*) New England, with its irregular lot sizes, shows a tendency below 100 feet for depth.

(*d*) Philadelphia shows tendency to smallest possible lot dimensions.

(*e*) With the exception of Philadelphia, the lot widths in all cities tend down to about 30 feet, while lots wider than 20 feet are recommended everywhere.

3. Effect of lot size on type of development.

(*a*) The lot area seems to be the original determining factor. Deep lots are made narrow, and narrow lots lead to narrow buildings, usually undesirable for residence or business. Deep lots, even down to 70 feet or 80 feet, tend toward having rear buildings, often residences. These conditions lead toward congestion and low values.

(*b*) Except in Philadelphia, the lot size has generally influenced the building size and the number of buildings per lot. In Philadelphia the desire for the single family house has developed the small size of lot.

4. Effect of lot and incidental building size on real estate values.

(*a*) Where growth is active, either in number of residences or conversion to other uses, the existing lot and building size is of little moment. Where conversion is slower the larger plots are worth more, because more easily converted

(*b*) Established poor occupancy tends to depress or at least restrain increase of values, through natural depreciation and the shift of classes of occupants, depending upon the condition of the dwelling.

5. Effect of restrictions on conditions.

Legal restrictions as to per cent of lot which may be covered, the shape and size of courts, and location of buildings on lots must be added to conditioning lot sizes, if best results are to be obtained.

6. Standard dimensions.

(*a*) The results of the investigation so far seem to show that standards are exceedingly desirable.

(*b*) A lot depth of 100 to 125 feet is the apparent aim of best standardized conditions and of present tendencies. There is considerable data and opinion to justify even shallower depths for certain classes of dwellings.

(*c*) In any event restrictions should be imposed by law.

The problem of land subdivision, we believe, is largely public regulation, control, and restriction. In fairness to all concerned, what should the real estate operator be allowed to do in this very important matter of dividing up and selling his property, cutting up land upon which people are to dwell for ages to come, changing agricultural acres wholesale into a form from which they can be changed again, if at all, only at great cost?

The principle of restrictions in the subdivision and use of land is well understood in the United States and very frequently applied. In fact, it is so well understood and so highly valued that it is most often applied in a surprisingly thoroughgoing way by the real estate operator in his own interest. The restrictions placed upon the purchaser in the conveyance of the property often include a long list of kinds of business which are classified as nuisances and which may not be established or maintained upon the property; regulation as to stables and garages; fences and walls; set back of buildings from streets and from lot lines; minimum cost of buildings; easements and rights of way for public utilities; and in some cases the approval of plans and specifications, including nature, shape, kind, height, material, color scheme, and location of buildings, and the grading plans of the plot to be built upon. These restrictions or conditions are often placed for a period of 25 years or more, with the right of renewal, subject to the assent of the owners. But, after all, can we depend entirely upon the knowledge, skill, and motive of the owner or operator to subdivide the land and place the restrictions? At best his action is uncertain; it is applied only in spots, often spasmodically, and even when most "public spirited," as we say, it is not always intelligent. Again, his chief motive must be profit. He can not reasonably be expected to have consistent and permanent concern for the results of his methods upon the future occupants of the property, nor upon the general public. Then, may we not add, he does not always know what is best; and if he did, not owning or controlling all the property of the city of town, or even a large percentage of it, he would not be able to make his knowledge effective. Furthermore, he has only the power of a private citizen.

In land subdivision, therefore, we must rely more and more on the right and necessity of the public to regulate private property with due regard to all the interests affected. In its final form this means the zone system of building districts; that is, the division of the city into areas each devoted primarily to industry, to business, and to residences. There might probably be further subdivisions of the residential districts into zones for different classes of dwellings, separating especially apartment houses and tenements from single family houses. In defining these building zones consideration should be given both to the rights of the community and the rights of private property owners. In the long run, these interests will prove to be more nearly identical than they are generally believed to be, and one of the best reasons for districting a city is that it makes general real estate values in all sections higher and more stable. The fixing of the boundaries for the various districts is as important as it is difficult. These boundaries should be determined not only by present conditions, but by a careful forecasting of the probable future conditions. In general, the prevailing opinion on this subject is that many of the areas should be relatively small, and they should be subject to change periodically, with changing conditions. Districts should be established in such a way as to help industrial, business, and residential interests; that is, effort should be made to provide each district with the best possible facilities for its purposes. In other words, the zoning or districting of a city in connection with land subdivision should help all kinds of buildings by discriminatingly limiting them to those districts in which they naturally belong, and by providing a first-rate development in each district for the various types of buildings. Each district or subdistrict will thus have its appropriate restrictions so as to safeguard it. The points of greatest importance will be depth of lot, percentage of lot allowed to be covered, or density per acre, and the height of buildings.

Some authorities hold that the housing question is primarily a question of land values. They claim that the value of a lot is dependent on the revenue from it, and that if building laws and local usage permit overbuilding on a lot, the buyer must pay more for the land, even though he intends to build only a small house. In other words, where the value of a lot is high as a result of building laws, the owner of the land must build compactly or lose money. Thus the density permitted and the value of the lot react on each other. If this view is sound, it follows that the proper regulation of the laying out and occupancy of the land can do much to improve housing conditions. Furthermore, some American writers hold that the rent payer's minimum outlay for house rent becomes an important factor in determining wages. Therefore, should not the minimum standards of housing be a home that meets the requirements of safety, health, convenience, privacy, and that degree of agreeableness which is considered essential? Of course these minimum standards, we believe, would prove advantageous not only to the workingman and his employer, but eventually to the land owning class also. The greatest burden of the present system, however, creating automatically as it does excessive congestion and slums, falls finally on the community.

In conclusion it should be said that there are, of course, technical problems involved in every land subdivision, and their solution requires skill and experience. Furthermore, these problems of land subdivision are related to still wider and more difficult technical problems of city planning, city building, city maintenance, and city administration, all requiring still greater skill, knowledge, and experience.

Land subdivision, as the term is used by architects, landscape architects, and engineers, determines the location and width of streets, roads, alleys, and other open spaces; the definition of building districts; the location, depth and length of blocks; the location of lot lines; the height of buildings; and other physical features. When the subdivision is made upon the initiative of the real-estate operator, and sometimes when it is made upon the initiative of public authority, it determines also building lines, restrictions, and conditions of development. Many examples could readily be given of what is done, and how it is done. Thus it would seem that land subdivision, determining so many matters in the physical lay-out of the city, has a very direct and important effect upon health and housing, perhaps greater and more permanent than any other single influence.

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